CONSUMERS' Guide

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Crusade for Facts

CONSUMERS' GUIDE

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THERE is horse-and-buggy-age buying by consumers today, just as there are antiquated patterns of other kinds of human behavior, but the number of consumers who are trying to put order and discrimination in their buying is increasing daily. Government agencies servicing consumers know this from the growing demand for facts about products and for buying guides.

In the first article in this issue the suggested tests of household products provide one kind of approach to the study of buying problems. Consumers seriously interested in equipping themselves as skilled buyers will, of course, not be content with such exercises. They will want to familiarize themselves with what government and industry offer as aids to rational buying.

Learning what a federal specification is like is a worthwhile lesson in the art of buying which every consumer should take. Guesses go by the board when the U. S. Government goes to market. Even before it makes up a marketing list, it puts laboratory experts to work, testing and checking, defining and redefining, so that when orders are ready there will be a minimum of doubt as to exactly what is wanted.

A federal specification not only describes the kind and quality of product desired but also the testing procedure to be followed in checking the product when it is delivered. From acetone, through adzes, hacksaw blades, medicine droppers, overshoes, pancake mixtures, shears, and soap, down to zinc oxide—these prescriptions, as it were, cover a multitude of goods, many of them the kind of household goods which an average family purchases. Anyone may secure free of charge "Price List 75, Federal Specifications," from the Superintendent of Documents, Washington, D. C., which gives ordering information on more than 1,100 specifications now available.

Industry, too, is attempting to work toward more accurate identification of products and the development of standards of size and performance. Not only consumer demand but sound business interests dictate pushing forward such work. Standardization is one route to lower production costs. "Commercial Standards" developed between industries and the National Bureau of Standards, and "Trade Practice Rules" prepared by the Federal Trade Commission, both in Washington, sometimes lay the foundation for standard practices helpful to household buyers. Consumers do well to keep informed on them.

Thirty-five trade associations are now engaged in standardization activities. An Advisory Committee on Ultimate Consumer Goods, with representatives of 5 national consumer organizations and the National Retail Dry Goods Association, has for a year been coordinating and directing the work of the American Standards Association in the consumer field. The National Retail Dry Goods Association, itself, has created a Consumer-Retailer Relations Council to study labels and recommend improvements in them.

At least a half-dozen large retail stores have set up their own testing laboratories for products sold in their shops. A large commercial testing laboratory is setting up little unit laboratories in smaller stores here and there over the country.

"Testing for consumer values," comments one trade journal, "is today at the threshold. It can be either boon or boondoggling, depending on the intelligence or forthrightness with which it is used."

Public schools, also a useful source of information for adult groups, are turning their attention to problems of consumers, and revamping courses in economics and business, in science, in mathematics, to tie them in with everyday buying experience of families. Even grade school youngsters are putting products through the paces in laboratories.

On the opposite page we show a photograph of some 8- and 9-year old laboratory workers in a school near New York who are comparing 8 brands of white bread for weight, texture, freshness, taste, molding time, weight loss, and price. These young consumers put their conclusions into practice. When they found bread No. 3 came out ahead of all others, they reported this to the 12-year old class whose members help in planning school meals. Bread No. 3 was promptly substituted for Bread No. 5 which the young stewards had until then been buying for their school. The school is now making a practical check of the testers' results. Soups, breakfast cereals, cleaners, paints, canned goods, textiles, and kitchen cutlery are some of the other consumer goods on the outline for work in this school.

There's work—and help—aplenty for the consumer group that wants to make a study of buying guides a major feature of its program.

The little scientist on our cover page is watching what happens when sulphur and iron filings are heated together in a test tube, a first step in the study of the relative rustability of a number of "stainless" steel kitchen utensils and tools.

Crusade for FACTS

FACTS—that's what consumers are after these days! Facts that answer such questions as these: What is it made of? How good is it? What are its best uses? How long will it wear? We give here some tests of common articles which can be made in clubs and schools, at meetings, in homes.

STRETCHING dollars to cover family wants—ask any family with less than $1,500 a year!—is no amusing pastime, but the family that knows how to pick and choose, how to balance relative needs, when to plunge and when to hold back on important expenditures, usually comes up winner. That's reason No. 1 for this crusade for facts.

Consumers are learning, too, that government and industry consider it bad business to buy by guess. They see these great purchasers buying by standards, and ask quite logically, why don't we? That's reason No. 2 why household buyers are on the march.

From 4 different sources, consumers are now looking for help in their buying problems. One of them is government; another, industry; a

third, independent testing agencies. The fourth is their own clubs and schools and improvised laboratories. In this story we are going to describe some of the tests which consumers can make for themselves.

There's fun as well as education in amateur testing, but the wise consumer must know also its limitations. Scientific conclusions depend on scientific technique. Obviously no one consumer group can attempt exhaustive analysis of all varieties of one product. (Some years ago it was said that there were 4,500 different brands of canned corn!) There is need, therefore, to guard against generalizing on the basis of a limited test. Nor can most consumers bring to their research the trained skill of a laboratory expert. Sometimes, only one of many qualities of a product lends itself to amateur testing. The value of a kitchen knife, for instance, depends not alone on whether its stainless steel will resist rust; a consumer test that seems to establish its rustability tells nothing about the cutting quality of the steel.

Such warnings are necessary, but they need not discourage consumers from using facilities at hand to learn more about the products they must buy. Now for some specific plans.

TESTING FOR QUALITY IN CANNED GOODS

Quality graders for canned fruits and vegetables in the Bureau of Agricultural Economics have worked out systems for grading many such products. Their methods and score cards have been published and furnish a basis for consumer tests. Copies of the Bureau of Agricultural Economics' standards can be secured free of charge from that Bureau in the Department of Agriculture, Washington, D. C.

As a starter we suggest that you try grading cream style canned corn. As your guide in this work, use the publication, "United States Standards for Grades of Canned Corn—Cream Style," Service and Regulatory Announcements No. 139. Hereafter we will refer to this publication as the Standards Booklet. A limited number of copies will be sent free on request to the Bureau of Agricultural Economics, U. S. Department of Agriculture, Washington, D. C. This publication contains the grading instructions and a score card for recording the results of your study. Also ask the Bureau of Agricultural Economics for a free copy of "Government Grading of Canned Fruits and Vegetables: Questions and Answers." Other background reading, useful in this enterprise, are these articles from the CONSUMERS' GUIDE: "Toward Better Consumer Standards," (December 14, 1936); and "How Cans Compare," (October 5, 1936).

It's a good rule for the leader of a group to try out a project first before staging a group test. On the basis of his own experience, the leader then knows how best to divide the various jobs among the members of his group.

Tests need properties. For a group that is testing for quality characteristics of canned corn this equipment is necessary: As many shallow pans as there are cans of corn to be graded. White enamel pans are used by government graders but any type of shallow cake pan will do. Other items are an accurate scale for checking the net weight of the can contents; a tea strainer for washing some of the corn so that the kernels may be more easily inspected; a can opener which will cut the lid of the can completely out very close to the rim.

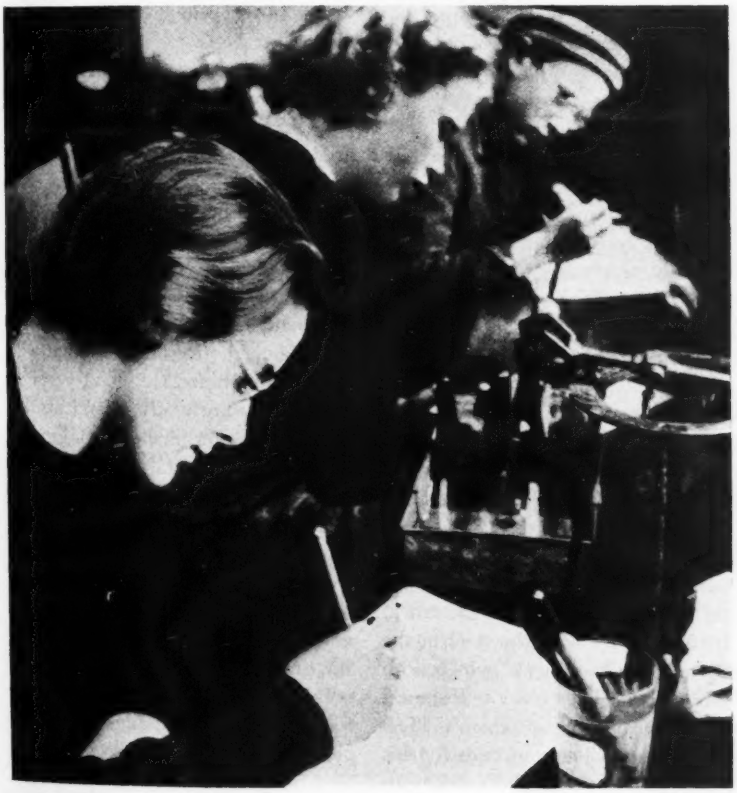
Now divide your group. Subgroup No. 1 can make a chart for tabulating the following information about each can: brand name; name of packer and/or distributor; net contents shown on the label; net contents as found by actual weighing; price per can; price per pound. After the chart is made and filled in as far as can be from the information on the label, remove labels and attach to each label and to each can from which it is removed a key symbol which will identify the can as it is put through its paces later on.

Sub-group No. 2 might then undertake a closer study of the labels. What kind of information is common to all labels? What distinctive features does each have? Appraise each bit of information for its usefulness to consumers in judging both the amount and quality of the contents. List the adjectives used in describing the corn. Do these adjectives give consumers a sure basis for comparing quality? Let these members draft what they think would be an ideal label.

In studying labels, useful supplementary reading is "A Study of Labeling of Certain Canned Goods," made by the District of Columbia Home Economics Association. This pamphlet may be secured from the American Home Economics Association, Mills Building, Washington, D. C., for 25 cents. Because many canners and consumers are debating the relative merit of "descriptive" and "grade" labeling, the members of such a group as this will want also to study statements made in support of "descriptive" labeling by the National Canners Association, whose headquarters are at 1739 H Street, Washington, D. C.

If you look at page 1 of the Standards Booklet (Service and Regulatory Announcements No. 139) you will find a definition of canned corn, a description of the two styles of pack—cream style and whole-grain style—and a general description of the different grades. This page is just an introductory statement and requires no action on the part of the group other than careful reading. The real work begins on page 2 with

Students in an Ohio high school are testing (above) some tooth powders and tooth pastes for abrasive qualities. A federal specification describes the method of making this simple test. In the laboratory of a school near New York City, these young consumers (below) are finding out if kitchen tools bought as "stainless" steel are really so.



the section, "Prerequisites to Grading." Sub-group 3 should be assigned to check the information in this section. First, the cans should be examined to see if they are sound, clean, free from rust and serious dents, and the ends flat or concave. A bulging end in a can indicates spoilage.

Sub-group No. 3 should also see if the cans meet the fill of container requirement described on page 2 of the Standards Booklet. Regulations of the Food and Drug Administration contain a blanket provision that cans will be considered slack fill if the head space, measured from the top of the product to the underside of the lid, exceeds 10 percent of the total inside height of the container. The table at the bottom of page 2 of the Standards Booklet gives the number of sixteenths of an inch head space allowed for each regular sized can. Shake the can vigorously. Cut out the top of each can, scrape the contents adhering to the top back into the can, and carefully measure the head space.

You are now ready to start actual grading, and all members of the group should participate in this activity. The instructions for grading begin at the top of page 3 of the Standards Booklet under the heading "Ascertaining the Grade." Use the score card reproduced on page 5 of the Standards Booklet for recording the scores with reference to color, consistency, absence of defects, cut, maturity, and flavor. A few suggestions on rating each of these qualities are given below.

COLOR: The outside coverings of kernels of young corn at the prime stage have a bright sheen. As the corn becomes more mature the covering of the kernel becomes thicker and duller in color. Place two tablespoonfuls of corn from a can in a tea strainer and wash the kernels by letting water run over them. Place the remaining contents on a

With a copy of the U. S. quality standards for canned peas in hand, this consumer is evaluating the contents of 3 different brands. Note that labels have been removed from the cans; liquid contents have been strained off into measuring cups; and the peas spread out in shallow pans for examination.

square of white paper marked with the number of the can. Repeat with another can. Compare the color of the kernels, and fill in the score sheet.

CONSISTENCY: Kernels of canned corn are considered to be in one of 4 general stages of maturity, called by graders the early cream, cream, dough, and hard stages. Each of these stages produces a particular consistency of canned corn. The best time to check this is when you pour the corn from the can into the shallow grading pan. As you pour the corn out note that in some cases it rounds out into a low mound of even contour. This corn is of a creamy consistency. Other cans when poured do not round into an even mound, but are irregular in shape and the product is pasty or crumbly. This is low grade corn. In some cases where corn is too mature the canner adds salt brine to the corn to make it of a creamy consistency. If after you have let the corn set in the pans a few seconds you notice some free liquor which looks like water running out at the edge of the mound of corn you may know that brine has been added. Such corn properly belongs in Grade C.

ABSENCE OF DEFECTS: This requirement deals principally with workmanship in canning the product. The corn should be spread out as thinly as possible on the bottom of the pans. It should be gone over carefully with a fork or spoon and all objectionable substances such as silks, husks, particles of cob, hard kernels, worm eaten kernels, pulled kernels, and discolored kernels, removed and placed on a square of white paper numbered to correspond with the can number. Sometimes when there is a crack in the tin or enamel coating of the inside of the can, the sulphur, which is present in all corn, unites with the steel in the can to form "can black" which is an easily discernible black substance, the chemical name of which is "ferro-sulphide." The standards for this section call for inspection of the can for rust and "can black." The presence of either lowers the score decidedly.

CUT: To make the rating on this point use the corn which was washed for checking the color of the kernels. Are the kernels severed cleanly and at a fairly even distance from the cob? If the cuts are irregular or if part of the cob tissue is included in the cut, the corn should receive a low score.

MATURITY: When we discussed checking the consistency of the corn we mentioned the different stages of maturity: early cream, cream, dough, and hard. Now give the maturity of the corn a definite score. Press kernels taken from the different pans and compare their firmness. By chewing a few kernels you can tell a great deal about maturity. Note that the standard specifically provides that corn which has reached the dough stage shall be graded not higher than Grade C no matter what its total score is.

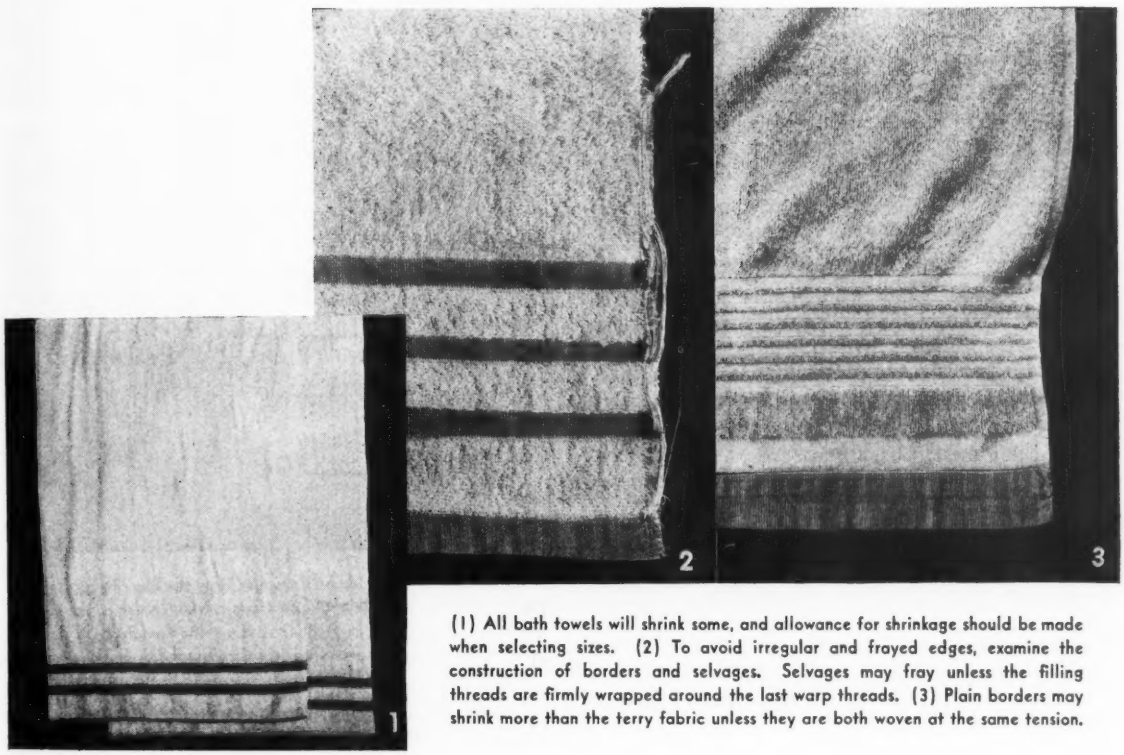
FLAVOR: After tasting the corn in the different pans you will begin to appreciate that there is a difference in flavors of corn. If it has a typical, distinctly young, tender corn flavor, give it a high score. If it has a rather dry, starchy, corn-mealy taste give it a score that will place it in Grade C. If it tastes musty, scorched, or if it is excessively salted or sweetened, give it a score that will place it in Grade D.

Now you are ready to add up the scores and determine the final grade according to the total points awarded. Next have a report from the subcommittees which checked up on label information, and the net weight and fill of container requirements. Summarize the discussion which has been going on all during the grading process. Probably there will be some disagreements as to the final estimates of grades and as to general conclusions. Average the

[Continued on page 18]

When You Buy Bath Towels

Experts of the Bureau of Home Economics tell you how to spot the best values in this household necessity



(1) All bath towels will shrink some, and allowance for shrinkage should be made when selecting sizes. (2) To avoid irregular and frayed edges, examine the construction of borders and selvages. Selvages may fray unless the filling threads are firmly wrapped around the last warp threads. (3) Plain borders may shrink more than the terry fabric unless they are both woven at the same tension.

IT MAY be used only for three to five minutes every day—a mere sliver of time in the span of 24 hours—but during that brief period the yard or so of terry cloth known as a bath towel, becomes an essential commodity in our lives.

Quick absorbency in a towel and size are all-important to the bather of the moment but to the custodian of the linen closet and of the family budget, there are many other features that the perfect towel should have. Besides being a quick drier, it should wear well, and should hold its shape and color through many washings. However, if the consumer is to be certain of all these factors which make for quality in towels, she needs information when selecting them. Facts on the label as to the size of towel, its absorptive power, and the number of yarns to the inch and the breaking strength of the material would be a definite help.

Ability of a towel to absorb moisture and not be weighed down by it so that for hours it will hang like a limp rag on the rack depends on the amount of pile or looped surface it has. The more pile yarns there are to the inch the greater the drying power of the towel.

Terry cloth used in turkish towels is woven with three sets of yarns. One set of warp and one set of filling yarns make the foundation cloth and an added set of warp makes the pile. The pile loops increase the surface area of the towel and hence its absorbency. The loops should be made of soft, not too tightly twisted yarns, and should be reasonably close together.

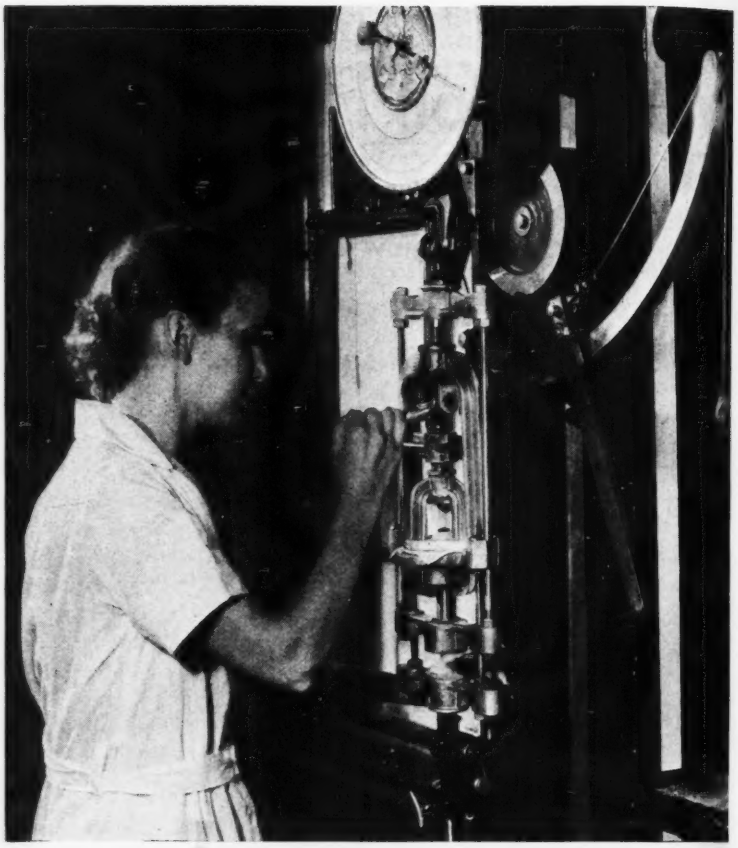
Softness and fluffiness in a new

towel are some indication of its absorptive power as it means that the yarns are not too tightly twisted and that there is a generous amount of pile. Often the luxurious feel of a towel is due to its long loops. From the standpoint of satisfactory service, however, too long loops are not desirable, as they are apt to catch and pull out. Loops about an eighth of an inch long are considered a good length.

Though heaps of pile mean good drying capacity, they are no indication of the wear one may expect from a towel. To get some idea of the durability of a towel, one must look beneath the pile to the foundation cloth. A firm ground is essential to hold the pile yarns in place and also to withstand the strain which the towel will get in use. The number of warp and filling yarns per inch is the precise information the consumer needs in accurately estimating the strength of the material. Lacking these facts, a sharp eye may be some help in judging the quality of the weave.

Most towels are woven with a three pick terry weave. "Pick" is just another name for filling yarn. Three pick terry means that there are three filling yarns to every horizontal row of loops. In a firmly woven towel, the pile should stay in place when the material is pulled through a tightly compressed thumb and finger.

Recently the Bureau of Home Economics made a study of sixty pairs of bath towels ranging in price from 14 cents to $1.50. All the towels were tested for the strength of their foundation cloth. In half of the towels studied, the cloth was as strong, or stronger, fillingwise as warpwise. In many cases, the greater strength was due to more filling yarns than warp yarns to the inch. There was also a wide variation in the number to the inch in all three sets of yarns. The lowest number of yarns per inch in both the warp and filling was found in the cheapest towels—those costing less than 35 cents.



When the Bureau of Home Economics tests the bursting strength of a towel, they fix a sample of the fabric in a frame which is placed in this machine. Pressure is exerted upward on the sample by a steel bar. Number of pounds of pressure it takes to break the fabric is recorded.

Strength and durability of a bath towel depend also on the quality of fiber used as well as on the firmness and balance of the weave. Linen is used for the pile in some "friction towels" and there are a few luxury towels on the market in which rayon is used, but cotton, because it is soft and absorbent and also launders well, is the chief fiber used in turkish toweling.

Single strand yarns (fibers twisted into a single thread) and two-ply yarns (two strands twisted separately and then twisted together) are used in weaving towels. For strength it is especially desirable for the ground warp to be made of two-ply yarns of good quality fiber, as it is this set of yarns which get the heaviest strain in both the weaving process and when the towel is in use. When the towel goes puffy in places and the pile loops stretch out, it is often due to breaking of a weak ground warp. The quality of yarn may be poor or not enough yarn was used in the warp to give it the necessary strength. For uniform wear, the ground warp should be at least as strong as the filling.

Good selvages on towels are important as they get hard wear at the

edges. A selvage making for a firm resistant-to-wear edge is one in which every filling thread is wrapped around the last warp thread. When the outside warp yarn is secured with only every second or third filling thread, frayed edges may be the result after a little use. Towels, usually those in the lower price range, are sometimes woven on wide looms and then cut lengthwise. The raw edges are either lockstitched or hemmed. Neither type of finish is as durable as a firm selvage.

Usually the ends of a towel are finished with a hem. All rough edges should be well turned under and the corners should be securely fastened. If the towel has a plain border, one-fourth of an inch turn-in is satisfactory, but if the towel is all terry fabric then there should be a deeper hem. By holding the hem up to a strong light one can usually see how much of the raw edge has been turned under.

Until a few years ago, a turkish towel meant a white towel. Today, they come in many different shades and color combinations. The consumer who goes for rainbow shades in bath towels should also be sure that they are color-fast to washing. Pastel shades, especially tempting when new, may go gray after a few launderings, unless the dyes are fast.

Gay borders on towels give a festive air to the towel rack. But in buying new towels it is best to examine the decorative ends for their practicality as well as their attractive design. Corded and embroidered borders have a tendency to shrink more than the terry material. The result is that the towel may pucker at the ends. Borders should be woven at the same tension as the foundation cloth. Also it is well to remember that the larger the plain border—the less drying area there is to the towel. It's the terry fabric which does the drying job.

When buying towels, one should be careful to get enough terry to do a satisfactory drying job. All towels shrink when first washed. Some may shrink as much as 14 percent in the first five launderings. After that they will keep their size. The size of the towels one buys should depend to some extent on the size of the person who is going to use them. For children a small or medium size towel is the most sensible as it is easier to handle. Many adults like the luxury of the extra large heavy towels. The member of the household who does the washing or pays the laundry bills undoubtedly will agree that large turkish towels are a luxury. Extra large towels are hard to handle on wash day, and if the laundry is done outside the home their increased weight means bigger laundry bills.

At one time, there were 96 different sizes of towels on the market, 74 of which were between 16 by 30 and 24 by 48 inches. In 1931 through the work of the Division of Simplified Standards of the National Bureau of Standards, in cooperation with the leading towel manufacturers, turkish towel sizes were reduced to six. Most towels sold today are small (16 by 30 inches and 12 by 26 inches), medium (20 by 40 inches and 22 by 44 inches), or large (24 by 46 inches and 24 by 48 inches). At least these are the usual sizes though actual measurements may vary from the accepted dimensions.

Bargains in bath towels do not always mean a saving in price per square yard of toweling. Sometimes towel specials are not from the regular stock. The merchandise may be offered at a cheaper price because

[Concluded on page 19]

A stop watch, a pan of water, and some measuring instruments are necessary equipment in a laboratory test of the rate at which a towel absorbs water. The distance that the water moves along a strip of towel within a specified time gives a laboratory expert a measure of the towel's absorptive quality.

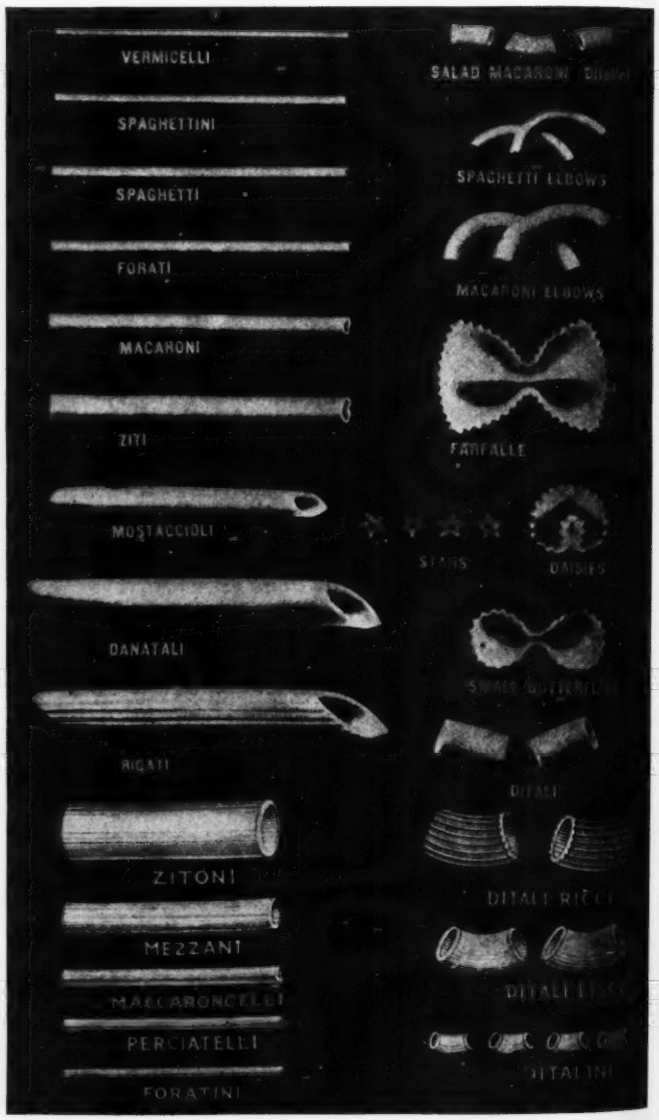
Facts about one of the foods that rates tops in fuel value

MACARONI—to Your Taste

LESS than 40 years ago, a Department of Agriculture scientist returned from Russia with sacks and sacks of durum wheat seed, one of the hardest wheats known, with flinty and translucent kernels. If it was tough enough to grow in the black fallow of south Russia, he guessed it ought to stand up on the similar soil, against the equally hard winters, of the American plains. It did, and soon American farmers were gathering in great yields of durum. Beginning with nothing but a cerealist's experimental seeds at the turn of the century, American production of durum reached a peak in 1928 of almost 100 million bushels. Since then, drought and rust and a shift of acreage into bread wheat have cut down the crop. During the past five years, we have averaged some 17 million bushels of durum a year, almost all from North Dakota fields; and during years of low yield, American semolina mills have imported durum from Canada.

Semolina, preferred ingredient in the manufacture of macaroni, is the purified middlings—more coarsely ground product than flour—of durum wheat. Semolina has more gluten (the elastic protein which forms gum for farm boys and girls who chew wheat) and less starch than the flour of bread wheat.

Also in wide use for macaroni products is farina, purified middlings of hard wheat other than durum.



Some manufacturers use flour, either alone or in combination with semolina, farina or both.

The man who brought durum wheat back from Russia heard skeptical Dakota farmers call it "macaroni wheat." So he worked to build up its market by making macaroni an American dish. The quality of macaroni he ate in hotels seemed to him, over 30 years ago, the great obstacle to the food he was boosting. "The most common form in which macaroni is served in this country is a very white, pasty, doughy mass of sticks, served in dilute tomato sauce," he lamented. "The most enthusiastic lover of macaroni would have little if anything to do with a dish of that kind. It is very little wonder there are few converts."

Today macaroni, spaghetti, vermicelli, noodles, combine to make an American industry which nearly reaches the 50 million dollar class. With units ranging from home size to large modern plants, the industry in 1935 produced 600 million pounds and no one knows how many miles of its variegated products. Volume of production was second only to that of Italy. But the average American—if there were such a mythical consumer—would be discovered by the statisticians to be eating only 4½ pounds of macaroni a year to the average Italian's 50 pounds.

Macaroni itself comes in the shape of hollow tubes, about one-fourth of an inch in diameter. Sticklers for form tell us there are different names for all the different widths. It if is only $\frac{3}{32}$ of an inch in diameter, call it "forantini" or "maccaroncelli"; if it is as big as half an inch in diameter, say "zitoni." In between these two there are innumerable sizes, with ringing names all.

Solid rods—no holes in the middle—are spaghetti, about $\frac{3}{32}$ of an inch in diameter; and vermicelli, only a third as thick.

Spaghetti, vermicelli, macaroni, differ from one another only in form; all can be made from the same dough.

Noodles—or egg noodles—must have eggs in them, according to the Food and Drug Administration's definition: At least 5½ percent, by weight, of egg solids, obtained by the use of whole eggs, or egg yolk, or a mixture of these. If they are made without eggs, they must be labeled "plain noodles," or "water noodles." Standard shape is the ribbon.

Variants on these basic forms appear as alphabets, stars, bows, cockle shells, butterflies, daisies, elbows and hundreds of other shapes. Only limits to new and different styles are set by the fancy of the manufacturer and the response of the consumer.

As energy foods at a reasonable price, macaroni products rate high. Dry macaroni furnishes about 1600 calories per pound. This is equivalent to about 100 calories for ¾ of a cup of plain boiled macaroni. Macaroni contains some protein, but it is protein of cereal origin and not what the nutritionists call "protein of high quality"—that is, it cannot in itself be relied upon to build and repair body tissue.

But macaroni is not usually served alone. Bland and without pronounced taste of their own, macaroni products combine well with many other foods—with cheese and tomato sauce, with meats and fish, with vegetables and with eggs. Reckoning the food value of the final product must take count of the "fixings."

Egg noodles also have the slight added food value of their egg ingredients. The egg is a small proportion of the product. In noodles with the minimum 5½ percent egg content, an 8-ounce package contains about the equivalent of one whole egg. Noodles, therefore, will be chiefly valuable for their calories, and not as a substitute for eggs in the diet.

For consumers who wish to consume but do not want to take time or trouble to cook, spaghetti comes in cans, with cheese or with tomato sauce. Some of these prepared products are cheaper than the equivalent amount of the same dish made at home; some are more expensive. Home economists' tests on a number of cans on the market showed that the home product, well cooked, ranked higher in quality—as measured by flavor, consistency, appearance—than the canned products examined. Biggest difference in favor of the home-cooked dish was in flavor. Of course, the nutritionists who dished up the home-cooked product knew enough not to overcook or otherwise ruin the spaghetti.

No consistent tie-up between price and quality could be found among the prepared spaghettis. Cheaper cans often contained a better product than the more expensive ones.

Yellowness is, by commercial custom, the first criterion of desirable macaroni in the raw. Certain strains of durum wheat are richest in the prized yellow. Under the standards of the Food and Drug Administration, no artificial coloring matter may be used to touch up white or dull gray macaroni or noodle products in interstate commerce. Yellow cellophane wrappers are likewise frowned upon as an obvious attempt at deception. Consumers should read labels to make sure they do not get "plain" or "water noodles"—without that egg content—unless they want just that and pay accordingly.

Consumers' only real test of macaroni is in the cooking. Good macaroni will keep its tube shape when boiled, while it swells up to twice its original size. It will be firm but tender, not pasty and sticky. Poor quality macaroni will emerge from boiling with a "starchy," "floury" or "musty" taste. Best results come from cooking in salty water.

Pointers for thrifty household buyers of tools that will take some of the drudgery out of keeping clothes clean*

Equipping the Home Laundry

HOUSEKEEPERS who struggle through indigo Mondays and only slightly paler Tuesdays in ill-equipped, ill-planned home laundries know what it costs to make "it all" come out in the wash. Primitive laundry methods take a heavy toll in time and energy, two capital assets of the homemaker. If human conservation is worth the trouble, modernizing home washing technique is one humble place to start it.

First, say the household engineers who know about such things, look to the place where the laundry is to be done. Can enough light and air get into it? Can spilled water drain off easily? Is the equipment arranged so as to save steps and too much bending? Like an efficiently planned factory, home laundries should have their equipment arranged in logical sequence.

Basic equipment for any home laundry, of course, is the washing machine. Before the Rural Electrification Administration started its big job of pushing power across the countryside into farm homes, almost half of the farm families in this country, it is said, had to do their laundry out of doors. Now, as power arrives, washing goes indoors and almost always the initial purchase of the farm family with electricity is an electric washing machine.

Purchasing power machines is poor economy unless you know what it is you want and whether you are getting it. Careful buyers read labels, and labels should tell not only the name of the maker, the serial number of the machine, whether it is for direct or alternating current, and if the latter, the number of alternating cycles for which the machine is planned, but also the voltage and wattage rating.

Two jobs are expected of a washing machine: First, that it wash clothes well without wearing them out; second, that it wash enough clothes at one time.

Capacity is measured in pounds of

**The first of two articles based on a bulletin prepared by the Textiles and Clothing Division of the Bureau of Home Economics on "Methods and Equipment for Home Laundering" (Farmers' Bulletin No. 1497). This valuable publication can be obtained for 5 cents from the Superintendent of Documents, Washington, D. C.*

clothes or number of sheets. Check the weight of your weekly wash instead of hazarding a guess as to the size of machine you want. Overloading is hard on clothes and machine. Washing efficiency depends not only on design but also on the soap used, on water temperature, on types of clothing and soil, on careful operation of the machine. Maximum washing time should be stated on instructions and observed in operation.

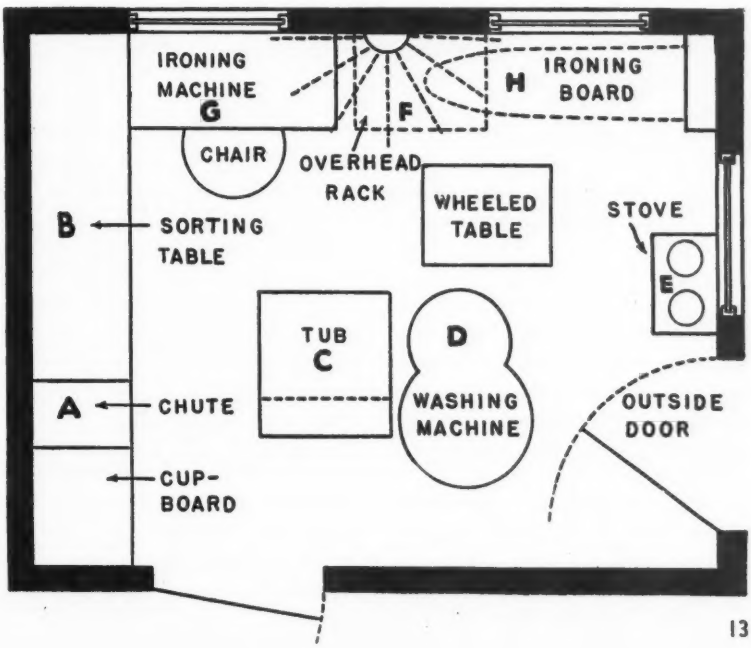
Ultimate costs should be balanced against the initial cost before you buy. Find out what it will cost to operate a machine; how durable it is; how accessible a repairman is. Both the material used in the machine and the way it is put together determine its durability and safety. Good steel or similar material should go into the framework, and be welded well and braced. Watch out for sharp edges of metal on which clothing or fingers may be torn. The outside of the machine must be electrically separated or insulated from any and all electrical connections. Wires, also well insulated, should be wrapped in thick flexible rubber. Connections and wire should carry a written guarantee for a specified time.

The tub itself should be of solid construction, safe against chipping, peeling, rusting, corrosion, or staining by alkali in water. Nickle alloy and stainless steel, best materials for use in a tub, are usually beyond the reach of the average budget. Efficiency shortcomings of other materials—such as porcelain-enamel and aluminum—must be balanced against their lower costs. Examine carefully the cover of the tub. Those that rate high are of rustproof, light material, such as steel or aluminum. They are highly polished as an aid to retaining the heat of the water as long as possible. Well-made ones are set in rubber to reduce noise and vibration when the machine is in use. Flexible arrangements for draining the tub are also a major feature to watch. A floor drain is best, but lacking this, a hose used as a syphon where piped water and sink drains are accessible will do the job almost as well.

So much for electric washers. For many households the cost of such machinery is beyond reach, but household engineers give tips to them, too. When washing must be done by hand, they say, wash tubs should be of a durable material easy to clean. Slate, soapstone, and enameled iron meet these standards. See that the tub is set high enough to minimize the amount of bending necessary. If possible, have the tubs installed where hot and cold water faucets can empty directly into them. If this is not possible, then a rubber hose connection to the nearest outlet can be substituted. Washboards should be of corrugated tin or iron, or rustproof stainless metal or glass. They should not come above the top of the tub and should be free of dangerous rough edges or sharp points that may catch fingers and clothing alike.

Important as the washing machine or wash tub is the wringer. Examine it closely to see if it has a safety feed device as a protection against the fingers or clothes of the operator getting caught in the rollers. Power wringers should have an automatic release that cuts the current and separates the rollers if the operator's hand is caught or if too bulky fabrics put an excessive strain on the rollers. Reversible drainboards and rollers mean added efficiency for the operator. "Balloon" type of rollers prevent injury to buckles and buttons, and do not subject the fabrics to as much wear as the hard rubber types. Power wringers should be adjustable in different positions; hand-operated ones should have adjustable

Bureau of Home Economics' experts designed this lay-out of a model home laundry (10½ by 8 feet). The soiled clothes go from the bottom of the chute (A), to the sorting table (B), then to the set tubs for soaking (C). From here some are put in the washing machine (D), while clothes for boiling go to the stove (E). An overhead rack (F) for drying is placed near open windows. Flatwork and other pieces can be ironed with the ironing machine at (G); hand ironing can be done on the folding board (H). A small wheeled table can be moved about for various jobs.



clamps that will hold the wringer firm.

More expensive machines are equipped with the modern "spinner" driers. These remove a larger proportion of water than the wringers, save time, and reduce breakage on buttons and wear on clothes. Housewives fortunate enough to have one of these machines should take care not to overload the drier and should see that the clothes are distributed evenly in it.

Wringers, like machines, should be sturdily built. All moving parts should be encased as far as possible to guard against dirt and injury to the operator. Ask for specific lubricating instructions so that you can give proper care to the complicated mechanism. Remember that too much oil can be just as harmful to a machine as too little.

Air and clean thoroughly machines, wringers and tubs after each time they are used. Use only very fine scouring powder for cleaning the metal parts of the machine. Hot vinegar or a solution of soapsuds and ammonia will remove obstinate stains. Rub the steel or iron frame with oil occasionally to prevent rusting. Wringers should be wiped completely dry. A cloth moistened with a few drops of kerosene will remove stains on the rollers, but the kerosene should be washed off the rubber immediately.

Small, low-set stoves for boiling clothes and other purposes are a boon to the home laundry. If possible, combination stoves which can be used as water tank heaters also should be installed. Those equipped with three burners are most efficient for boiling clothes and preparing starch at the same time. Stainless steel and copper wash boilers will give the best service; the more economical tinware boiler with copper bottom and rim is almost as good. Tinwear boilers must be dried carefully each time they are used as a check against rust. In purchasing a boiler notice whether or not it has a faucet at its base to ease the job of emptying it.

Starching utensils can usually be recruited from the kitchen, but a new set avoids any worry over rust or stains. The equipment should include a saucepan, a spoon, a measuring cup, a strainer, and a large pan or pail for mixing the starch and dipping the clothes.

Drying of clothes should be done in the fresh air and sun in the out-of-doors. Suburban dwellers with plenty of space in their backyards can install "pulley" lines made with cotton or hemp rope, or galvanized or copper wire. Wire lines are more permanent but should be wiped with a damp cloth before using and guarded against rust. Boil a new rope in soapy water for a few minutes to soften it. This also gives it longer life.

For urbanites with cramped yard space a revolving outdoor drier is most efficient. On rainy days a wooden frame in the house equipped with ropes and pulleys for lifting is a good substitute.

Time has not improved on the old-fashioned clothespin. As long as it is made of sound smooth wood it will serve the housewife long and well. Those with springs are of better quality, but corrode easily. Putting clothespins in a bag or basket hooked onto the line can speed up the job of hanging the clothes.

Curtain stretchers can be of the standard frame type or can be made at home by winding strips of wood with heavy cloth to which the curtain is pinned. Simpler still is the method of pinning them to a clean sheet stretched over a rug.

Put dirty clothes in laundry bags which may be washed with the rest of the laundry. Enameled hampers which can be easily wiped out are almost as good. For carrying the clean clothes to and from the line a basket lined with washable oilcloth or heavy paper will prevent dirt and moisture soiling the laundry.

Final chapter in this saga of making shirt, sheet, and handkerchief look fresh and clean is the ironing. The more modern presser and rotary types of ironing machines have been finding increasing favor among housewives whose weekly wash runs high. These practically eliminate fatigue in pressing clothes, and, according to experts, cut approximately 20 percent of the time required for hand operated irons. Both operate most efficiently when equipped with automatic heat control. The presser type, a modification of the old-fashioned flat-iron and ironing board, should exert anywhere from 300 to 600 pounds of pressure and should have variable heat controls allowing for a range from 200 to 500 degrees.

Rotary types, operated completely by hand and foot levers, require more care in purchasing. The pressing surface of the "shoe" (presser) should be of highly polished rustproof and scratchproof metal that is a good conductor of heat. Notice whether the back of the "shoe" is insulated to reflect the heat forward to the pressing surface. It should be well protected against leakage of electricity. The roll should be reinforced at the ends and well padded. Ask whether clothing can be arranged on the roll easily without danger of burnt fingers. Is your laundry small enough to use the usual 26 inch roll, or do you need a larger one? Is the shoe well supported and well braced? Are there adequate safety devices?

These are but a few of the questions the housewife should ask herself when she purchases a machine. Decide before you purchase, the type and size machine best suited to your needs. The machine should be guaranteed for a definite length of time

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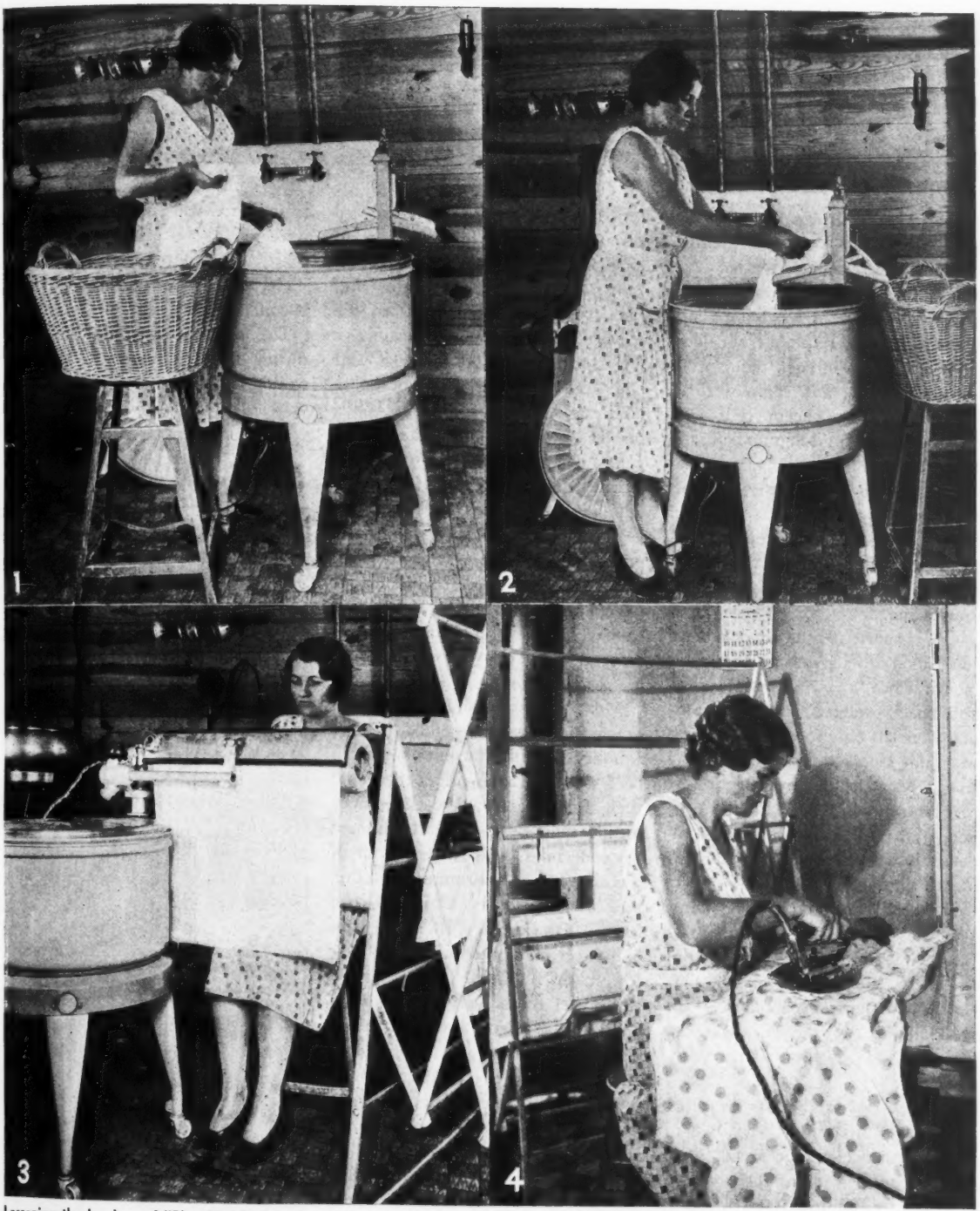


Lessening the burdens of "Blue Monday" and adding hours of free time for the launderer is accomplished in this household by both modern machinery and arrangements that reduce tiresome bending. In (1) the laundry basket is conveniently placed on a high stool that can be moved about on casters. The washed clothes in (2) are put through a power wringer equipped with safety features and a reversible drainboard. Ironing is speeded up (3) with a modern roller presser. The adjustable iron (4) allows for varying the heat needed in pressing different kinds of fabrics. Note the convenient rack on which the newly-ironed laundry is hung.

Your Food Supplies & Costs

DOWNSWING in retail food costs which started last September continued at an accelerated rate from mid-December to mid-January as costs dropped three percent. This marked decrease resulted from sharp price reductions in eggs, dairy products and meats, and slight declines in all other groups except fresh vegetables. Since mid-September the cost of food in the consumer's market basket has moved down 6½ percent and returned to levels that prevailed in early 1936. A 16 percent drop in meat prices has been the major factor behind this larger than seasonal downswing.

On January 18, the retail cost of food stood at its lowest point for this month since 1935. Sugar, cereals and bakery products, and dairy products were the only food groups which were not below their January 1937 level. Meat costs were the lowest for January since 1935, while eggs and fresh fruits and vegetables repectively were at their lowest for this month since 1934 and 1933.

Index of retail food costs on January 18 as reported by the Bureau of Labor Statistics stood at 80.3 percent of the 1923–25 average, or five percent lower than a year earlier. In mid-January 1933 the index was 62.6 compared to 102.7 on January 15, 1929.

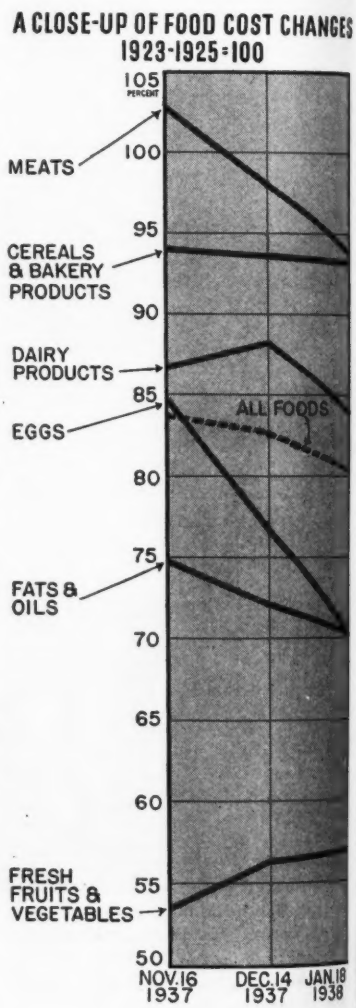
Changes in food costs in cities along the Atlantic Coast, where the largest declines occurred, were slightly greater than the average drop for the United States while in cities along the Pacific Coast the decline was only 60 percent of average.

Course of food costs in general probably will continue downward through March with the rate of change influenced by business conditions. Prices of beef, butter and eggs, three important items in the market basket, are expected to move down and to remain under a year ago. The declines may not be as large as recent changes. Apple, orange, poultry, potato, and lamb prices are not expected to change much, even though these items usually advance at this period of the year. Poultry probably will be the only item in the group retailing above a year earlier. Seasonal advances are in prospect for onions and cabbage until substantial supplies from the early crops grown this year are available in April or May.

Meat prices continued to tumble downward from December 14 to January 18 with sharpest changes in beef steaks. Lamb prices registered their first substantial decline since hitting their peak last fall. Recent price declines have cancelled all of the increases of last summer and fall, and carried prices back to 1935–1936 levels. On January 18 beef steaks and fresh pork were selling at their lowest price since January 1935, while beef roasts were at their mid-1936 level. Bacon and ham prices, respectively, were the lowest since April and June 1935, but lard hit its lowest price since August, 1934. Lamb cuts, however, were retailing slightly above a year ago.

Since reaching their peak last fall, prices of fresh pork and beef steaks, respectively, have dropped 14 and 12 cents per pound, or about double the decline in ham, becon, and beef roasts. Price declines per pound from December 14 to January 18 were as follows: Steaks 3¼ cents, roasts 2½ cents, fresh pork and sliced ham 1¾ cents, lamb cuts and bacon 1½ cents, and lard 1 cent.

Decline in better grade beef prices during the next few months probably will be smaller than anticipated in view of the sharp declines which



have occurred already. During the first week of February, choice and prime grade steers at Chicago averaged about $8.50 per hundred pounds, slightly less than half their peak price last October. The sharp decline in better grade cattle prices has narrowed the margin between better and medium grade beef. In early February this margin was considerably below average, compared with the largest margin on record last fall. Despite prospects of only slight additional price declines, slaughter of better grade cattle still is expected to increase seasonally during the spring and summer.

A PERSPECTIVE OF FOOD COST CHANGES
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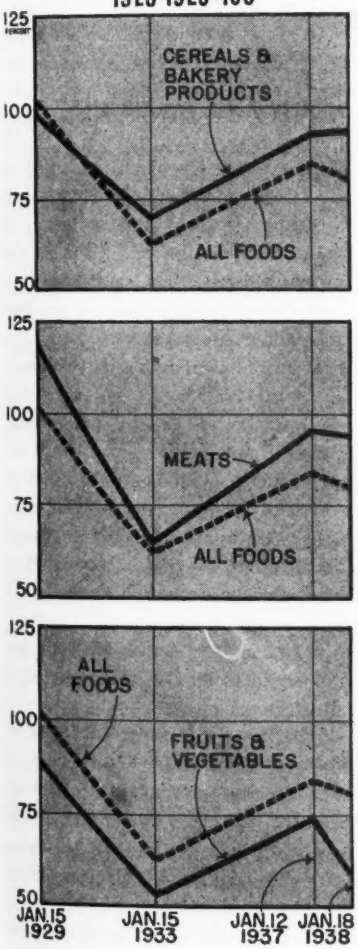

Lamb price outlook also has shifted. It now appears that prices will not advance much during the next few months, and that retail prices may ease off a little more. From December through April lamb prices usually move up as grain fed lambs move to market. This year the price trend through early February has been downward.

Frozen and fresh dressed poultry supplies during the first half of 1938 are expected to be less than a year ago. Prices probably will continue higher than in 1937, but the advance during the first half of 1938 may be relatively small. Recent high prices have been the result of a contrary and seasonal price upswing during the last half of 1937. During the month ending January 18 retail prices of roasting chickens jumped one-half a cent per pound, but they were six cents above a year ago, and the highest for January since 1930.

Butter prices probably will decline more than usual from January through June. Larger production and lower prices than a year ago are in prospect. On January 18 the retail price of butter was five cents a pound below December 14, and about one-half cent a pound under a year ago.

Potato supplies during the first half of 1938 may be about a fifth more than a year ago, if average yields are obtained in new potato producing areas. Bulk of supplies until May come from storage holdings of late grown potatoes, which on January 1 were about a fourth above January 1, 1937. In view of large supplies, prices of old potatoes probably will show little change during the next few months. New potato prices, however, will trend downward as supplies increase. On January 18 retail potato prices were unchanged from the previous month and almost half their 1937 level.

Cabbage and onion supplies during the first quarter of the year come primarily from storage holdings of late grown crops, and consequently are expected to be less than in 1937. Cabbage holdings on January 1 were 40 percent under a year ago, and the smallest on record. Onion holdings were a fifth below January 1, 1937, and the smallest since 1935. Retail prices of both items moved up around one-half cent a pound from December 14 to January 18. On the latter date onions and cabbage respectively were at their highest January level since 1932 and 1934.

Strawberry season swings fully underway in February. Strawberries move to market from January through June, with heaviest shipments and lowest prices in May. Florida is the sole source of supply until the latter part of March, when shipments move from Louisiana, the largest berry producing State. In May practically all the berry producing areas ship to market. Production in Florida is expected to be about a twelfth smaller than a year ago. The season in this area is almost a month late due to December freezes and this may cause a bunching of shipment in February and March.

Retail orange prices have dropped to low levels, and in mid-January appeared to be at or close to their low point for the season. A smaller than usual price advance is expected until the end of the marketing season next fall. From December 14 to January 18 retail prices dropped 3.5 cents a dozen. On the latter date they were the lowest since March 15, 1933.

Average retail white bread prices per pound have remained unchanged since June. During this same period retail flour prices have gone down three-quarters of a cent per pound. On January 18 bread prices remained at their highest level since September, 1929, but flour prices were the lowest since July, 1933.

CRUSADE FOR FACTS

[Continued from page 6]

scores of each tester to arrive at a consensus of opinion.

Consumer groups which want to grade other kinds of canned goods besides cream style canned corn can ask the Bureau of Agricultural Economics, U. S. Department of Agriculture, Washington, D. C., for free copies of standards for grades of other kinds of products. Some grades have technical requirements which can be determined only with special equipment. In other cases the requirements are stated in general terms which demand the judgment of a grader who has been given a careful course of training before he is allowed to do official work.

Official graders of canned fruits and vegetables are located in 16 cities throughout the United States. The Bureau of Agricultural Economics will be glad to send the names and location of graders. If your group is located in or near one of these cities you may be able to arrange a demonstration by an official grader.

DENTIFRICES

As U. S. Government standards for grades of canned goods serve as guides for rating canned goods, Federal specifications are guides to checking other types of consumer goods. For illustration, let's take the new Federal specification for Dentifrices, No. FFF–D–191, available from the Superintendent of Documents, Washington, D. C., for 5¢.

Some of the tests included in this specification must be made in a technical laboratory, but the abrasion test can be performed by anyone. This test is particularly important to anyone who wants to avoid a dentifrice which scratches glass. When the National Bureau of Standards tested 25 dentifrices it found that 10 checked by this technique did scratch glass.

To test for abrasion the specification prescribes: "Tooth paste shall be placed on glass and rubbed with a copper alloy similar in composition and shape to the five-cent coin which has previously rubbed on glass without scratching. The glass shall be the usual soda-lime grade such as is used in non-corrosive microscope slides." Non-corrosive microscope slides may be secured from any company selling scientific apparatus. Ordinary window glass may be tried out if microscope slides are not easily available, but as window glass is not a standardized product, the results will be less reliable. A 5-cent coin may be used as the rubbing agent. Wash the glass after it has been rubbed and hold it up to the light at different angles. Scratches refract the light and are readily seen.

TEXTILE FIBER IDENTIFICATION

Complete identification of textile fibers requires technical training and laboratory equipment. There are, however, a few interesting experiments which any consumer may perform.

From a small swatch of the material to be tested, unravel crosswise and lengthwise yarns. Untwist these yarns to see if they are made up of strands of two different kinds of fiber, and if so test each strand separately. You may find that one ply (single strand) yarns are made up of several fibers, and in this case you cannot apply the tests suggested here.

Apply a lighted match to an end of the yarn to be tested. Notice the way in which the material under test burns. Blow out whatever flame there is and smell the smouldering yarn. Material that flames readily and gives a smell like burned paper will be rayon or one of the vegetable fibers, e. g., cotton, linen, hemp, jute, etc. Cellulose acetate burns a little less readily and the yarns burn back, like sealing wax. The ends of the extinguished cellulose acetate yarns will be hard black globules, and the fumes will have a faint vinegar-like smell.

Silk and wool yarns will burn with difficulty and in burning will smell somewhat like burned feathers. If the silk is weighted with tin or lead, the metal weighting will not burn but will remain as black ash. The ash of a heavily weighted silk textile, if burned in the piece, will have the form of the original.

It may be well to have a "control" test to check your results; that is, when you think you have a fiber identified, check your results against a piece of cloth whose composition you know.

HOUSEHOLD EQUIPMENT

Have your group bring in their electric bread toasters for comparison at a meeting devoted to the testing of household equipment. Place the bread in the holders but do not turn them up into the toasting position yet. Plug in the toaster and let it heat for exactly one-half minute. Turn the holders up into the toasting position for exactly one minute. Remove the toast and repeat the experiment with another toaster. Make careful comparisons of the results. Comparisons of convenience features and strength of construction may also be included in the check list.

Stainless steel knives may be immersed in water for several weeks to see if they corrode.

The heat retaining efficiency of vacuum bottles may be checked by weighing into each bottle a definite amount of heated water and checking the temperature at two-hour intervals with an accurate thermometer.

You can get some interesting in-

formation about the efficiency of the electric irons owned by the members of your group by conducting a scorch test. Have members owning different makes of irons bring them to a meeting. Secure sheets of white blotting paper and cut them into sizes slightly larger than the irons. Dry the blotting paper thoroughly. Place the paper on a sheet of asbestos or other non-combustible surface, plug in the cold iron and leave it on the paper for exactly 10 minutes. Repeat with the other irons. The foot prints of the irons will give a picture of their relative heating efficiency. Some irons will thoroughly blacken the whole area covered by the iron. Others will show the outline of the heating element, while some will make little impression. Any group wishing to make a detailed study of electric irons will find useful "Selection and Care of the Electric Iron," by P. B. Potter and F. H. Bass, Bulletin 307, obtainable free of charge from the Virginia Agricultural Experiment Station, Virginia Polytechnic Institute, Blacksburg, Virginia. This bulletin contains a picture showing the results of a scorch test of 15 irons.

WHEN YOU BUY BATH TOWELS

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it is not the regular size. It has been cut short or woven narrow or is imperfect in some respect.

The same qualities that make for satisfaction in bath towels hold for wash cloths. The foundation cloth should be firm to hold the loops securely in place. The loops, however, may be a little more twisted as the cloth is used to cleanse the skin rather than dry it. Edges should be well fastened and if the material has a border it should be woven at the same tension as the foundation cloth. Sometimes a knitted terry with loops only on one side is used for wash cloths. Its soft texture is preferred by some people. However, the knitted terry is inclined to stretch out of shape and become stringy.

For more information on bath towels and wash cloths, write to the Superintendent of Documents, Washington, D. C., for Farmers Bulletin 1765, GUIDES FOR BUYING SHEETS, BLANKETS, BATH TOWELS, price 5¢.

EQUIPPING THE HOME LAUNDRY

[Concluded from page 14]

to be shockproof. It should be marked with the type and serial numbers, manufacturer's name, whether it is for alternating or direct current, and what the rating in volts and amperes or in volts and watts is. The shoe should be kept clean by rubbing with a wet cloth and wiped dry. When it is starting to heat, rub it lightly with paraffin or beeswax to prevent scorching.

Electric hand irons more widely used than the others, have kept up with the times in streamlining and automatic operation. Discriminating housewives today are able to purchase at a moderate cost irons which can be regulated by a mere twist of the switch for use on various types of fabrics, be they rayon, silk, wool, cotton, or linen. Thermostatic control prevents overheating of the iron through automatic control of the current. The heat of the iron should be centralized in the actual pressing surface, which should itself be smooth, rustproof and scratchproof, and highly conductive of heat.

Many irons are made with special grooves for ironing under buttons, thumb rests and with large, specially shaped handles designed to allow ironing in difficult places such as sleeves. Irons vary in weight from four to eight pounds, the tendency being to make them lighter. The 800 and 1000 watt ratings are preferable to those rated at from 600 to 660 watts.

Ironing boards are most efficient when from 31 to 32 inches from the floor. They should be padded with double-faced cotton flannel used for silence clothes on dining tables, or with an old blanket. Enough material should be used to give the surface spring without making it cushiony. Old sheets may be used for covering, but new unbleached sheeting, not an expensive item, is better. New covers should be washed to remove all starch and other finishing materials. They should be changed at the first sign of scorch because of the danger of staining fabrics ironed on the covers. Fireproofing coverings is also a wise safeguard. (See "An Ounce of Prevention," CONSUMERS' GUIDE, January 31.) The boards themselves are most efficient when built into a special wall cupboard with a shelf for the iron, sponge, and other small equipment. Apartment dwellers especially will find such a space conserver helpful in overcoming the restrictions of most apartment kitchens.

Study Questions For This Issue

1. *What is a federal specification?*
2. *What are the six characteristics of canned corn which should be examined in attempting to grade such a product?*
3. *What feature in the construction of a bath towel determines its absorptive power?*
4. *What information about the weave of a bath towel do you need to help in judging its wearing quality?*
5. *What is the food value of macaroni?*
6. *What are the regulations of the Food and Drug Administration regarding the coloring of macaroni or noodle products?*
7. *What are four features of an electric washing machine which should be carefully examined before purchasing? What four of a wringer, an ironing machine?*
8. *How much have food prices decreased since last September? What is the main reason for this decrease?*

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FACTS—that's what consumers are after these days! Facts that answer such questions as these: What is it made of? How good is it? What are its best uses? How long will it wear? We give here some tests of common articles which can be made in clubs and schools, at meetings, in homes.

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Experts of the Bureau of Home Economics tell you how to spot the best values in this household necessity.

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Facts about one of the foods that rates tops in fuel value.

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